

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013517**Date Inspected:** 02-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** You Qi Guo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

Tower Trial Assembly

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW):

Weld joint # 067 located on North Tower Lift-1 Bearing stiffener Plate NSD1 – SA17F/G. Welder is identified as 040261. ZPMC Quality Control (QC) Inspector is identified as Qiu Wen. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2333 – Tc – P4 – F.

Weld joint # 019 located on East Tower Lift-1 Bearing stiffener Plate ESD1 – SA296B/E. Welder is identified as 040713. ZPMC Quality Control (QC) Inspector is identified as Qiu Wen. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2333 – Tc – P4 – F.

Weld joint # 041 located on North Tower Lift-1 Bearing stiffener Plate NSD1 – SA76F/H. Welder is identified as 057266. ZPMC Quality Control (QC) Inspector is identified as Qiu Wen. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2333 – Tc – P4 – F.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Shielded Metal Arc Welding (SMAW):

Repair welding of a weld joint # 30 according to the critical weld repair report #T-CWR-3071 located on North Tower Lift-1 NSD1 – SA22B/E. Welder is identified as 050289. ZPMC Quality Control (QC) Inspector is identified as You Qi Guo. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 3G (3F) – Repair.

BAY 10

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 005259

Ultrasonic Testing (UT)

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as Tower Component. The weld designations reviewed are as follows:

TOWER SPARE STRUT

ED1 – A6004 – 2 – 8; 9; 10; 11; 12 (A/B)

This QA Inspector observed the following work in progress:

Sub-Merged Arc Welding (SAW):

Weld joint # 19B located on Grillage Plate NSD1 – SA4 – 10 – 119M. Welder is identified as 050295. ZPMC Quality Control (QC) Inspector is identified as Sun Tian Liang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3221 – B – U3c – S – 1.

This QA Inspector observed the following work not in compliance:

During random 10% verification Ultrasonic Testing (UT) of Tower Strut, this Quality Assurance Inspector (QA) discovered the following issue:

One (1) Class “A” non conforming longitudinal indication measuring approximately 15 mm in length.

The weld is a complete joint penetration (CJP) corner joint, joining Web P5004 to Flange P5001 and is identified as ED1-A6001-4-7B.

The discontinuity rating is +6, Class “A” reject

Depth of the discontinuity from face A is approximately 27 mm, and Y location was 130mm.

The Material thickness is 32 mm.

The member is located in fabrication Bay 10.

The indication is in an area previously tested and accepted by ZPMC QC UT technicians.

The Notice of Witness Inspection Number (NWIT) is 005259.

Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 Section 6.26.3.1 – “Welds that are subject to UT in addition to visual inspection shall be acceptable if

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

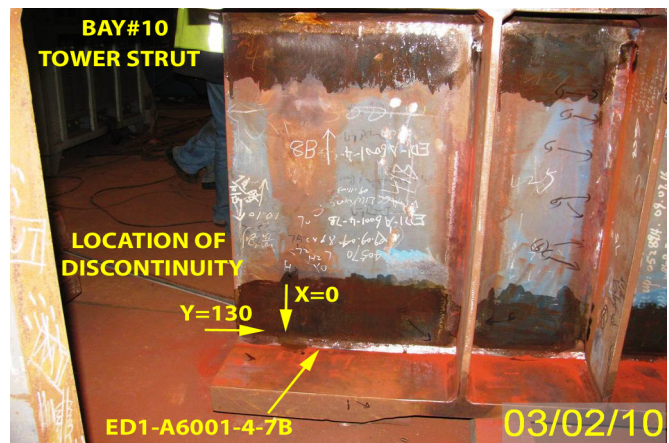
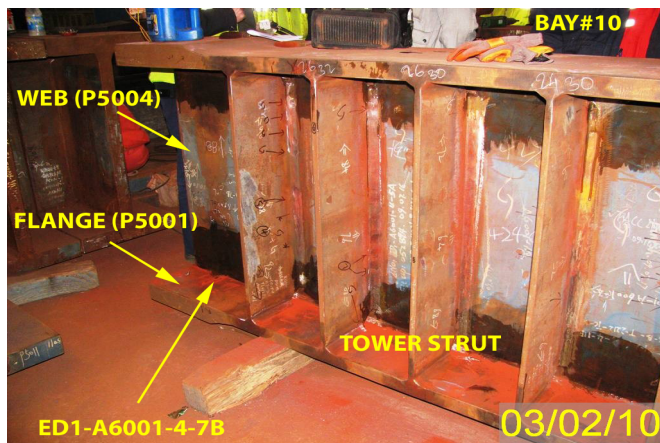
they meet the following requirements:... (1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4.”

AWS D1.5-02 Section 6 – Table 6.3

This QA notified ZPMC QC identified as Mr.Sun Tian Liang and ABF inspector identified as Mr. Kong Xian Hui of the above issue and that an incident report will be generated.

See attached photos:

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
